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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

14

Application Number

09/893,194

Filing Date

June 27, 2001

First Named Inventor

Pradeep Kumar Subrahmanyam

Art Unit

2652

Examiner Name

A. Cao

Attorney Docket Number

STL9842

ENCLOSURES (Check all that apply)

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/
Incomplete ApplicationReply to Missing Parts
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a
Provisional Application

Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____

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Remarks



After Allowance Communication to TC

Appeal Communication to Board
of Appeals and InterferencesAppeal Communication to TC
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosures (please identify
below):**RECEIVED
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MAY 16 2005

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

Seagate Technology LLC

Signature

Printed name

Derek J. Berger

Date

May 16, 2005

Reg. No.

45,401

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

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Date

05/16/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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* page 14 and 15 weren't received at the time of indexing.

Practitioner's Docket No. STL9842**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****RECEIVED
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In re application of: Pradeep Kumar Subrahmanyam

MAY 16 2005

Application No.: 09/893,194

Group No.: 2652

Filed: 06/27/2001

Examiner: A. Cao

For: Moving Magnet Voice Coil Motor Using Halbach Arrays

**Mail Stop Appeal Briefs – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450****TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION—37 C.F.R. § 41.37)**

1. Transmitted herewith is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on March 14, 2005.

2. STATUS OF APPLICANT

This application is on behalf of other than a small entity.

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:

other than a small entity	\$500.00
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Appeal Brief fee due	\$500.00
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4. EXTENSION OF TERM

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee	\$500.00
Extension fee (if any)	\$0.00

TOTAL FEE DUE	\$500.00
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Transmittal of Appeal Brief—page 1 of 2

6. FEE PAYMENT

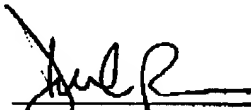
Authorization is hereby made to charge the amount of \$500.00 to Deposit Account No. 19-1038.

A duplicate of this transmittal is attached.

7. FEE DEFICIENCY

If any additional extension and/or fee is required, and if any additional fee for claims is required, charge Deposit Account No. 19-1038.

Date: May 16, 2005



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720-684-2265

PATENTIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	Pradeep K. Subrahmanyam		
Serial No.:	09/893,194	Examiner:	A. Cao
Filed:	June 27, 2001	Group Art Unit:	2652
Title:	Moving Magnet Voice Coil Motor Using Halbach Arrays		
Docket No.:	STL9842		

APPEAL BRIEF

This appeal is filed in response to the final Office action mailed November 15, 2004 (hereinafter "the Final Action").

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MAY 16 2005

(1) *Real party in interest*

The real party in interest is Seagate Technology LLC.

(2) *Related appeals and interferences*

There are no related appeals or interferences.

(3) *Status of Claims*

Pending claims 1, 3-15 and 17-31 stand rejected. Claims 1, 3-15, 17, 18, 28 and 31 are hereby appealed. Appellant does not appeal claims 19-27, 29 and 30 and in fact has requested cancellation of these claims; the Office has neglected to make any decision regarding this request.

Pending claim 16 is objected to as including allowable subject matter but depending from a rejected claim.

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(4) Status of Amendments after Final

An amendment was filed after final rejection on January 18, 2005. This amendment requested cancellation of claims 19-27, 29 and 30. The Examiner has neglected to address this amendment, and there is no indication that it has been entered.

(5) Summary of Invention

As described in the specification from page 11, line 5 through page 12, line 23 and depicted in FIGs. 3-5, one embodiment of the present invention may be summarized as an actuator assembly (such as 320) for an information handling system (such as 300) comprising a stationary shaft (such as 520) and a main body (unnumbered, portion of moving actuator such as that to the right of arm 123 and surrounding opening 318 in FIG. 4). The main body has an opening (such as 318) therein positioned around the shaft (such as 520) such that the main body is rotatable about the shaft (such as 520). At least one actuator arm (such as 123) is attached to the main body. A voice coil motor comprises at least two magnets (such as 531,532), and the magnets (such as 531,532) are supported by the main body within the opening (such as 318).

As described in the specification from page 11, line 5 through page 12, line 23 and depicted in FIGs. 3-5, another embodiment of the present invention may be summarized as an information handling system (such as 300) comprising a base (such as 112), a yoke (such as 520) attached to the base (such as 112), a coil (such as 510) attached to the yoke (such as 520), a storage medium (such as 134) attached to the base (such as 112), and an actuator assembly (such as 320) having an opening (such as 318) therein. The actuator assembly (such as 320) further includes at least two magnets (such as 531,532) positioned near the opening (such as 318). The magnets (such as 531,532) and coil (such as 510) form a voice coil motor (such as 500). The actuator assembly (320) is capable of swinging through an arc and is rotatably attached to the base (such as 112) about the yoke (such as 520).

(6) Statement of Rejection as to Appealed Claims

(1) Claims 1, 3, 4, 8, 9, 18, 28 and 31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,016,131 to Riggle et al. (hereinafter "Riggle").

(2) Claims 5-7 and 10-15 and 17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Riggle.

(7) Argument

Rejection (1):

Claims 1, 3, 4, 8, 9, 18, 28 and 31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,016,131 to Riggle et al. (hereinafter "Riggle").

Claim 1 recites an actuator assembly comprising "a stationary shaft, a main body having an opening and magnets being supported by the main body within the opening." Riggle discloses only magnets 17,18 which are mounted to a stationary shaft 16, and which cannot reasonably be said to supported by the main body 11 of the actuator. For at least this reason, Riggle does not show each and every element of claim 1 and therefore cannot reasonably be said to anticipate claim 1.

The Office has been extremely unhelpful in describing what it considers to be Riggle's "main body." On page 2 of the Final Action, it is contended that Riggle's "main body" may somehow be construed as including every element in Fig. 2, for example, except for element 28. Such a construction would appear to suggest that Riggle's shaft 16 may form part of the "main body." This effort is presumably made in a weak attempt to suggest that Riggle's magnets 18,19 are "supported" by the main body. However, given that claim 1 explicitly requires that the "main body" be rotatable about, and therefore separate from, the shaft, such a position is simply not permissible.

On page 7 of the Final Action, the Office suggests that while Riggle's magnets 17,18 are not "mounted to" the main body of the actuator, they are nonetheless "supported" by it. The question is moot, however, given that Riggle's magnets 17,18

are neither supported by nor mounted to the actuator main body. Riggle's magnets 17,18 are supported by stationary shaft 16, as can clearly be seen in Fig. 4. The Office has failed to provide any support whatsoever for the ridiculous assertion that Riggle's main body 16 "supports" magnets 17,18 despite Appellant's request that it do so. For at least these reasons, Appellant respectfully requests reversal of the rejection of claim 1 and allowance thereof.

Claims 3, 4, 8 and 28 depend from claim 1 and are allowable for at least this reason.

Claim 9 recites an information handling system comprising "a coil attached to [a] yoke" as well as requiring that "the actuator assembly [be] capable of swinging through an arc and rotatably attached to the base about the yoke."

The Office suggests on page 3 of the Final Action that elements 26,28 respond to the "yoke" limitation. However, claim 9 explicitly states (1) that a coil is attached to the yoke; and (2) that the actuator is rotatable attached to the bas about the yoke. An examination of Riggle's device reveals that (1) the actuator is neither fixed to nor rotatable about element 28; and (2) the actuator is not attached to the base about element 26, nor is it rotatable about element 26 which is in fact fixedly attached to the actuator. Because Riggle cannot reasonably be construed as meeting the limitations set forth above, withdrawal of the rejection and allowance of claim 9 is respectfully requested.

Claims 18 and 31 depend from claim 9 and are allowable for at least this reason.

Rejection (2):

Claims 5-7 and 10-15 and 17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Riggle.

Claims 5-7 depend from claim 1 and are allowable for at least this reason, but are allowable for additional reasons as well. The Office acknowledges that Riggle does not

disclose magnets which are oriented orthogonally to one another (as required by claims 5 and 25), circularly (as required by claims 6 and 26) or as a Halbach array (as required by claims 7 and 27). Rather than making a *bona fide* attempt to address the shortcomings however, the Office has effectively brushed them off by insisting that to so modify Riggle would represent "obvious rearranging of parts . . . in order to improve magnetic flux between magnets and coils." Such a statement is simply not reasonable, given that Riggle discloses only stationary magnets on a stationary shaft. Riggle simply does not lend itself to the bizarre modifications proposed by the Office. It is clear that the Office has merely used the present application as a roadmap in an effort to mangle Riggle to meet the limitations of these claims. Such hindsight is impermissible. Withdrawal of the rejections of claims 5-7 and 25-27 is respectfully requested.

Claims 10-15 and 17 depend from allowable claim 9 and are themselves allowable for at least this reason.

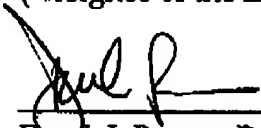
Conclusion:

Appellant maintains that present claims identify the features and benefits of the present invention clearly and concisely. The present invention as claimed is not taught or suggested by the prior art of record or any combination thereof. Therefore, it is respectfully submitted that the appealed claims are in condition for allowance, and favorable action is respectfully requested.

Respectfully submitted,

Seagate Technology LLC
(Assignee of the Entire Interest)

May 16, 2005
Date


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Appendix of Appealed Claims

1. An actuator assembly for an information handling system comprising:
a stationary shaft;
a main body having an opening therein positioned around the shaft such that the main body is rotatable about the shaft;
at least one actuator arm attached to the main body; and
a voice coil motor comprising at least two magnets, the magnets being supported by the main body within the opening.
3. The actuator assembly for an information handling system of claim 1 wherein the magnets form a rotor of the voice coil motor.
4. The actuator assembly for an information handling system of claim 3 wherein the voice coil motor further comprises a coil about which the rotor rotates.
5. The actuator assembly for an information handling system of claim 1 wherein at least two of the magnets are adjacent one another, and the orientation of adjacent magnets are substantially orthogonal to one another.
6. The actuator assembly for an information handling system of claim 1 wherein the magnets are substantially circularly oriented so that the magnetic flux outside a perimeter of the circularly oriented magnets is negligible.
7. The actuator assembly for an information handling system of claim 1 wherein the magnets are arranged as a Halbach array.
8. The actuator assembly for an information handling system of claim 1 wherein the voice coil motor is positioned near one end of the actuator assembly and at least one load spring and transducer are positioned at the other end of the actuator assembly.

9. An information handling system comprising:

- a base;
- a yoke attached to the base;
- a coil attached to the yoke;
- a storage medium attached to the base; and
- an actuator assembly having an opening therein, the actuator assembly further including at least two magnets positioned near the opening, the magnets and coil forming a voice coil motor, the actuator assembly capable of swinging through an arc and rotatably attached to the base about the yoke.

10. The information handling system of claim 9 wherein the voice coil motor further comprises a plurality of magnets attached to the main body of the actuator assembly, wherein the orientation of adjacent magnets are substantially orthogonal to one another.

11. The information handling system of claim 9 wherein the voice coil motor further comprises a plurality of magnets substantially circularly oriented so that the magnetic flux outside a perimeter of the circularly oriented magnets is negligible.

12. The information handling system of claim 11 wherein the voice coil motor further comprises a plurality of magnets arranged as a Halbach array.

13. The information handling system of claim 11 wherein the yoke is made of a material capable of absorbing heat.

14. The information handling system of claim 11 wherein the yoke is formed of the same material as the base.

15. The information handling system of claim 11 wherein the yoke is formed integral with the base.

17. The information handling system of claim 9 wherein the voice coil motor produces a first moment about a pivot and a second moment about the pivot, the first moment being substantially offset by the second moment.

18. The information handling system of claim 9 wherein the voice coil motor is a true torque motor.

28. The actuator assembly of claim 1, in which the information handling system comprises a disc drive.

31. The information handling device of claim 9, in which the storage medium comprises a rotating disc.